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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO.         | CONFIRMATION NO.       |
|---|-------------|-----------------------|-----------------------------|------------------------|
| 10/650,160  | 08/27/2003  | Douglas Gene Keithley | MP0976(13036/17             | 7056                   |
| 60537 7590 12/11/2007<br>BRINKS HOFER GILSON & LIONE/MARVELL<br>P.O. BOX 10395<br>CHICAGO, IL 60610 |             |                       | EXAMINER<br>PHAM, THIERRY L |                        |
|   |             |                       | ART UNIT<br>2625            | PAPER NUMBER           |
|   |             |                       | MAIL DATE<br>12/11/2007     | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/650,160

Applicant(s)

KEITHLEY, DOUGLAS GENE

Examiner

Thierry L. Pham

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

### DETAILED ACTION

- This action is responsive to the following communication: an Amendment filed on 10/4/07.
- Claims 1-37 are currently pending.
- Amendment filed (10/4/07) with respect to the objected "title" has been considered and entered by examiner.
- Replacement drawing sheet (fig. 5) has been considered and accepted by the examiner.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oikawa (JP 05167850A), and in view of Yamagishi (US 20030231340A1).

Regarding claim 1, Oikawa discloses an apparatus (optical printer, abstract and par. 8-12) comprising:

- a first processor (pattern matching circuit 1, abstract and par. 2-5), the first processor adapted to:

identify a grid of pixels having a predetermined pattern (pattern identification, par. 3-7) of pixel values;

obtain a predetermined pcode (pulse width modulating circuit 2, abstract and par. 2-5) grid from a memory, the predetermined pcode grid corresponding to the identified grid of pixels; and

send the predetermined pcode grid to controller circuit (par. 33) for printing instead of the grid of pixels.

Oikawa fails to teach and/or suggest the predetermined pattern having an undesirable toner placement.

Yamagishi, in the same field of endeavor for image forming apparatus, teaches a well-known example of the predetermined pattern having an undesirable toner placement (predetermined pattern having plurality of image noises, fig. 2, pars. 9-14, page 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify image forming apparatus and predetermined pattern of Oikawa to include a detection unit for detecting predetermined pattern having undesirable toner placement (e.g. image noise) as taught by Yamagishi because it corrects variations in image density to output a superior quality image (par. 7-8, page 1 of Yamagishi, also see par. 20).

Therefore, it would have been obvious to combine Oikawa with Yamagishi to obtain the invention as specified in claim 1.

Regarding claim 2, Oikawa further discloses the apparatus recited in claim 1 wherein said processor is a pcode processor (pulse width modulating circuit 2, abstract and par. 2-5).

Regarding claim 3, Oikawa further discloses the apparatus recited in claim 2 further comprising a second processor (pulse density modulation, par. 28) adapted to format print data to pixel data, the pixel data including pixel values.

Regarding claim 4, Oikawa further discloses the apparatus recited in claim 1 wherein the first processor is adapted to format (par. 28) print data to pixel data, the pixel data including pixel values.

Regarding claim 5, Oikawa further discloses the apparatus recited in claim 1 wherein the grid of pixels is a six-pixel by six-pixel grid (par. 8).

Regarding claim 6, Oikawa further discloses the apparatus recited in claim 1 wherein the memory is a register internal (par. 10) to the first processor.

Regarding claim 7, Oikawa further discloses the apparatus recited in claim 1 wherein the memory is non-volatile but re-writable memory (storage memory device within optical printer including RAM, DRAM, EEPROM, hard drive, and etc).

Regarding claim 8, Oikawa further discloses the apparatus recited in claim 1 wherein the memory is external to the first processor (e.g. host computer, par. 15).

Regarding claim 9, Oikawa further discloses the apparatus recited in claim 1 wherein the predetermined pattern of pixel values and its corresponding pcode grid applies to a first color and a second predetermined pattern of pixel values and its corresponding pcode grid applies to a second color (par. 16-18).

Regarding claim 10, Oikawa further discloses the apparatus recited in claim 1 wherein the apparatus is selected from a group consisting of a printer (optical printer, par. 3-7), a copier, and a multifunction appliance.

Regarding claims 11-17: Claims 11-17 are the methods corresponding the apparatus and recite limitations that are similar and in the same scope of invention as to those in claims 1, 3, 5-9 (respectively); therefore, claims 11-17 are rejected for the same rejection rationale/basis as described in claims 1, 3, 5-9 (respectively) above.

Regarding claims 18-37 recite limitations that are similar and in the same scope of invention as to those in claims 1-17 above; therefore, claims 18-37 are rejected for the same rejection rationale/basis as described in claims 1-17.

### ***Response to Arguments***

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection via using newly found prior art due to newly added features/limitations as cited in independent claims.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L. Pham whose telephone number is (571) 272-7439. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571)272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thierry L. Pham

GABRIEL GARCIA  
PRIMARY EXAMINER

